

CAMBRIDGE INTERNATIONAL EXAMINATIONS**Cambridge International General Certificate of Secondary Education****MARK SCHEME for the October/November 2015 series****0607 CAMBRIDGE INTERNATIONAL MATHEMATICS****0607/23**

Paper 2 (Extended), maximum raw mark 40

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Abbreviations

cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
nfw	not from wrong working
soi	seen or implied

Question	Answer	Mark	Part Marks
1	30	1	
2	$5 - (2 + 3) \times 2 = -5$	1	
3	$\begin{pmatrix} 1 \\ -12 \end{pmatrix}$	2	B1 for each component
4	$\frac{18}{25}$	1	
5	1	2	M1 for $10 \times 5.5 - 9 \times 6$
6	3	2	M1 for $\sqrt{(\sqrt{3})^2 + (\sqrt{6})^2}$
7	7 -2	1 1	If 0 scored SC1 for correct substitution and evaluation to find the other variable
8	105	2	M1 for 42×2.5 oe or SC1 for figs 105
9	-3	1	
10 (a)	-8	1	
(b)	$-7n + 27$ oe	2	SC1 for $-7n + k$ or $27 + kn$, $k \neq 0$
11	$\sqrt{v^2 - 2as}$	2	M1 for correct rearrangement for u term M1 for correct square root
12	$(2a - b)(1 + x)$	2	M1 for $2a - b + x(2a - b)$ or $2a(1 + x) - b(1 + x)$
13 (a)	$\frac{1}{27}$	1	
(b)	8	1	
(c)	$\frac{\sqrt{3}}{2}$	1	

14	$2x^2$	2	SC1 for kx^2 or $2x^k$, $k \neq 0$
15		1 1	
16	$y = x - 2$ oe	3	B2 for $y = x + k$ oe or $y = kx - 2$ oe or M1 for gradient = $\frac{2-0}{0-2}$ or better or M1 for substituting co-ordinates of one point into <i>their</i> $y = mx + c$
17	$3(\sqrt{5} - 2)$ oe	2	M1 for $\times \frac{\sqrt{5}-2}{\sqrt{5}-2}$
18 (a)	$y(3-y)$	1	
(b)	$\frac{y}{3+y}$ final answer	2FT	FT only if $(3-y)$ or $(3+y)$ is cancelled B1 for $[9-y^2 =](3-y)(3+y)$
19 (a)	$\frac{2}{3}$	2	M1 for $\frac{2 \log 2}{3 \log 2}$ or $\log_8 4$
(b)	1.5 oe	1	
20	5	1	